



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,711	12/19/2001	Stein A. Lundby	PA020015	3873
23696	7590	10/07/2003		
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714			EXAMINER LEE, TIMOTHY L	
			ART UNIT 2662	PAPER NUMBER

DATE MAILED: 10/07/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,711

Applicant(s)

LUNDBY, STEIN A.

Examiner

Timothy Lee

Art Unit

2697

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 7. 6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. Claim 11 is objected to because of the following informalities: "minimize" in line 1 should be changed to "minimizes". Appropriate correction is required.
2. Claims 5 and 15 are objected to because of the following informalities: "the channel interference" lacks an antecedent basis. Appropriate correction is required.
3. Claims 6 and 16 are objected to because of the following informalities: "the transmission power levels" lacks an antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizucki et al. (EP 0 999 656) in view of Noneman (US 5,887,252).
6. Regarding claims 11 and 24, Mochizucki et al. discloses a multicast transmission system. The system includes a base station for transmitting a multicast message on a single transmission channel and plural mobile terminals which receive the multicast message on the single communication channel (transmitting the multicast service on at least one channel). The mobile terminals include a measurer for measuring a reception power of the multicast message and judging whether the signal strength is powerful enough. They also include a transmitter for transmitting back to the base station a transmission-power-increment-requesting-signal for

Art Unit: 2697

requesting the base station to increase a transmission power of the multicast message. Based on the information received from the mobile terminals, the base station can increase the power of the multicast message as needed (using channel quality information for at least one subscriber to determine the transmission format of the multicast service to the group of subscribers). See col. 2, lines 21-48, and col. 6, line 57-col. 7, line 37. It is inherent that the base station will include a memory element and a processor for processing the instructions stored in that memory to increase or decrease the power depending on the information received from the mobile terminals. Mochizucki et al. also discloses modulating the multicast message but does not expressly disclose generating an identifier for a group of subscribers, wherein the identifier is for accessing a multicast service. Noneman discloses using a single spreading code for each multicast service. When receiving a request for multicast service, the base station can issue an Extended Handover Direction Message (EHDM) to the mobile terminal. The EHDM contains a field that specifies the code channel index that the mobile terminal is to use on the forward traffic channel. The channel is the same channel that the base station will use when transmitting the multicast information and corresponds to the Walsh code index used for spreading the data signal. The mobile station sets up its receiver to receive the specified Walsh channel and descramble it using along code generated with the long code mask contained in the MULTICAST_GROUP field. See at least col. 2, lines 44-59, and col. 4, line 63-col. 5, line 48. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a single spreading code taught by Noneman for each multicast service group of Mochizucki et al.. One of ordinary skill in the art would have been motivated to do this because it is more efficient to transmit the same spreading code to the various stations that will be receiving the same information. There is no

Art Unit: 2697

need to have them use different spreading codes if they will be descrambling the same information.

7. Regarding claims 1 and 23, neither Mochizucki et al. nor Noneman expressly discloses that the channel quality information will be used for determining the timing of the multicast service to the group of subscribers, but it would have been obvious to a person of ordinary skill in the art at the time of the invention to use channel quality information disclosed in Mochizucki et al. to adjust the timing of the multicast service in addition to the transmission format change that was disclosed already in Mochizucki et al.. One would have been motivated to do this because adjusting the timing along with the transmission format could lead to a better chance of transmission success.

8. Regarding claims 2 and 12, as mentioned previously, Noneman discloses that the mobile station will set up what channel to use based on the information contained in the EHDM, so therefore, the scrambling code information and the multicast data are more than likely sent on separate channels (transmitting identifier on the a first channel and transmitting the multicast on a second channel).

9. Regarding claims 3 and 13, as mentioned previously, the whole purpose of sending the mobile stations the spreading code is so that they can properly descramble the signal and read it when they receive it, so before a signal must be descrambled, it must have been scrambled originally at the base station.

10. Regarding claims 4 and 14, Mochizucki et al. discloses that as a result of the operation of determining when to increase or decrease the power, the value of the power converges to a minimum necessary value for the mobile station which locates farthest away from the base

station to receive the multicast message. All thing being equal, the mobile station that is farthest away will typically have the worst channel conditions. See also col. 7, lines 32-37.

11. Regarding claims 5 and 15, although Mochizucki et al. does not expressly disclose measuring the channel interference on the pilot channel, it is well-known in the art that stations will measure the signal to noise or signal to interference ratio on this channel to determine what power and what base station to connect to.

12. Regarding claims 6 and 16, as mentioned previously, the channel quality measurements are in direct result of the transmission powers of the base station.

13. Regarding claims 7 and 17, in Mochizucki et al., the signals sent from the mobile stations to the base stations are a type of acknowledgment signal. When the base station changes the power, the mobile station responds with messages requesting more power if it is needed.

14. Regarding claims 8 and 18, in Mochizucki et al., if the mobile stations are located very far away, then many of them will transmit a transmission request (or what can be considered an acknowledgement) for a higher powered signal. The first few attempts to transmit from the base station can be considered "test packets" in this situation because the mobile stations will not be able to read them correctly if the power was not strong enough to begin with.

15. Regarding claims 9 and 19, Mochizucki et al. discloses that as a result of the operation of determining when to increase or decrease the power, the value of the power converges to a minimum necessary value for the mobile station which locates farthest away from the base station to receive the multicast message. All thing being equal, the mobile station that is farthest away will typically have the worst channel conditions.

Art Unit: 2697

16. Regarding claims 10 and 20, it is inherent in Mochizucki et al. that the subscriber with the worst channel condition will continue acknowledging until the base station is transmitting with enough power so that it can properly receive the signal. See also col. 7, lines 32-37.

17. Regarding claims 21 and 22, as mentioned previously, the whole purpose of sending the mobile stations the spreading code is so that they can properly descramble the signal and read it when they receive it, so before a signal must be descrambled, it must have been scrambled originally at the base station. Also, Mochizucki et al. discloses that as a result of the operation of determining when to increase or decrease the power, the value of the power converges to a minimum necessary value for the mobile station which locates farthest away from the base station to receive the multicast message. All thing being equal, the mobile station that is farthest away will typically have the worst channel conditions. See also col. 7, lines 32-37.

18. Regarding claim 25, neither Mochizucki et al. nor Noneman expressly discloses that the channel quality information will be used for determining the timing of the multicast service to the group of subscribers, but it would have been obvious to a person of ordinary skill in the art at the time of the invention to use channel quality information disclosed in Mochizucki et al. to adjust the timing of the multicast service in addition to the transmission format change that was disclosed already in Mochizucki et al.. One would have been motivated to do this because adjusting the timing along with the transmission format could lead to a better chance of transmission success. Also, Mochizucki et al. discloses that as a result of the operation of determining when to increase or decrease the power, the value of the power converges to a minimum necessary value for the mobile station which locates farthest away from the base

station to receive the multicast message. All thing being equal, the mobile station that is farthest away will typically have the worst channel conditions. See also col. 7, lines 32-37.

Conclusion


19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Grube et al. (US 6,333,921), Yonge et al. (US 6,522,650), and Sato et al. (US 2002/0003798) disclose system that involve multicasting.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy Lee whose telephone number is (703)305-7349. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703)305-4744. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

TLL


HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600